



GSA REPORT TO 3GPP PCG #21

Moscow

October 6, 2008

Scope of report



- ❖ **Market snapshot**
 - ❖ *subscriptions*
 - ❖ *mobile broadband networks*
 - ❖ *devices*

- ❖ **UMTS900**

- ❖ **GSA 10 Years Anniversary**

- ❖ **Current topics and activities**



GSA promotes 3GPP Systems and Standards Worldwide
GSA is a Market Representation Partner of 3GPP

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Market snapshot – subscriptions



3.36 billion GSM, WCDMA-HSPA subs (current estimate)

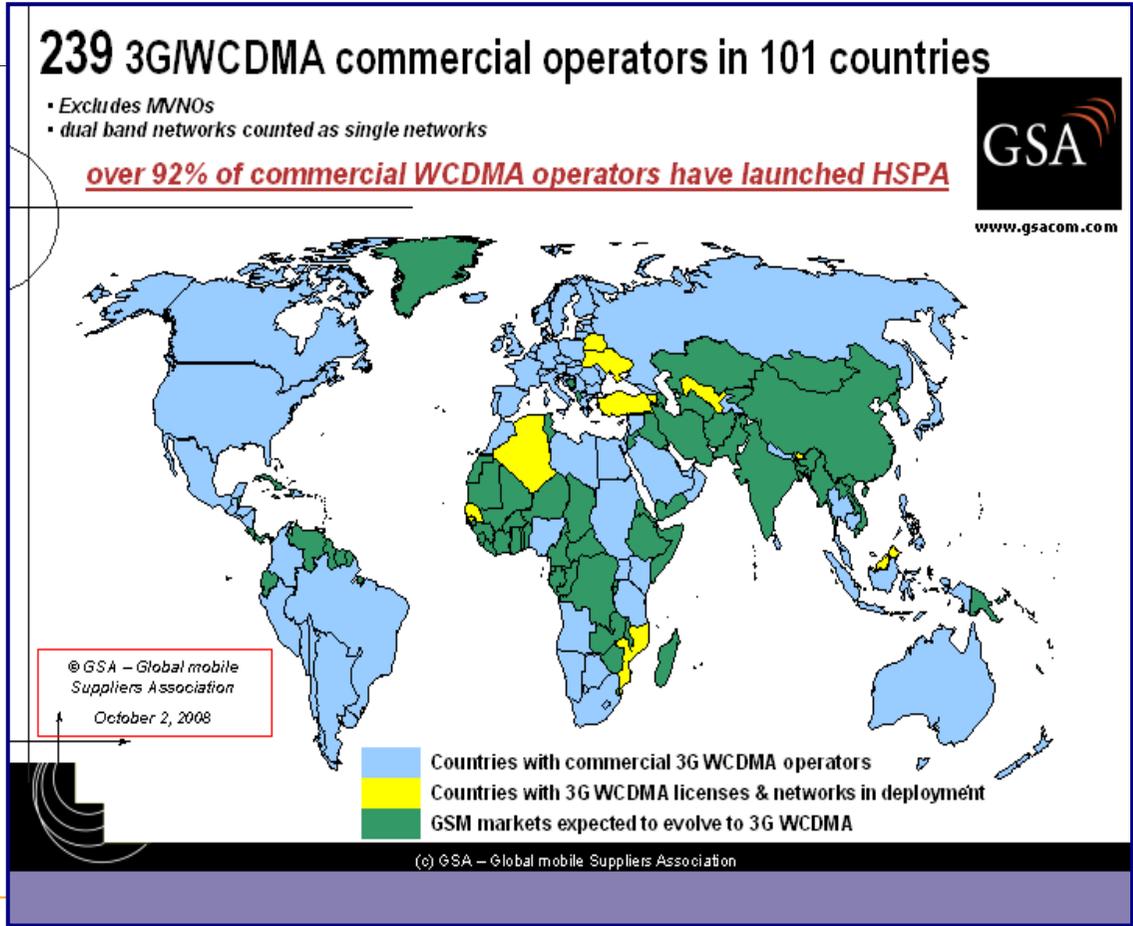
GSM/WCDMA has 87.95% worldwide market share (Q2 08)

**BRIC countries - Brazil, Russia, India, and China together
account for over 1 BILLION GSM Subscriptions**

235.5 million WCDMA subs including HSPA (Q2 08)
71% yearly growth

Over 50 million HSPA subscriptions worldwide

Market snapshot – networks

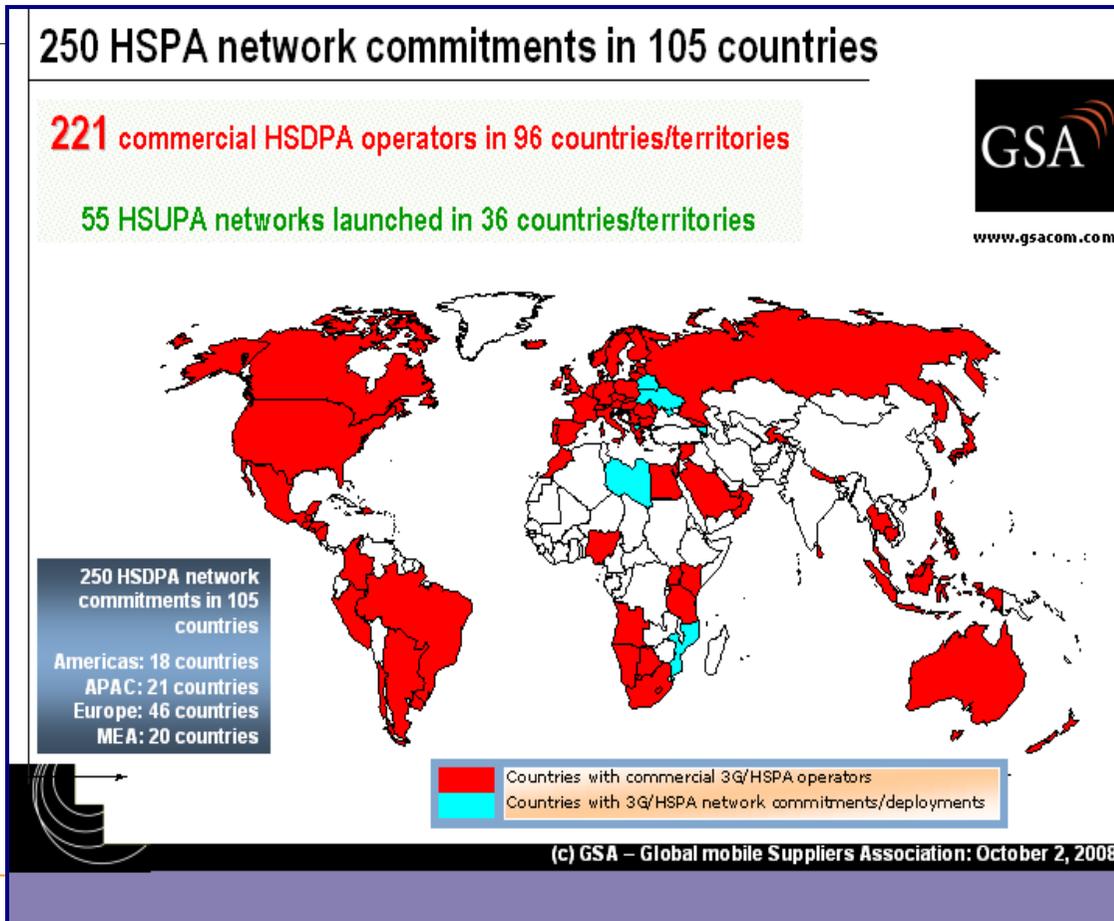


**WCDMA
networks
launched in
more than 100
countries**

**Over 92% of
commercial WCDMA
operators have
launched HSPA**

**WCDMA Operator Survey: GSA
- October 2, 2008**

Market snapshot – networks



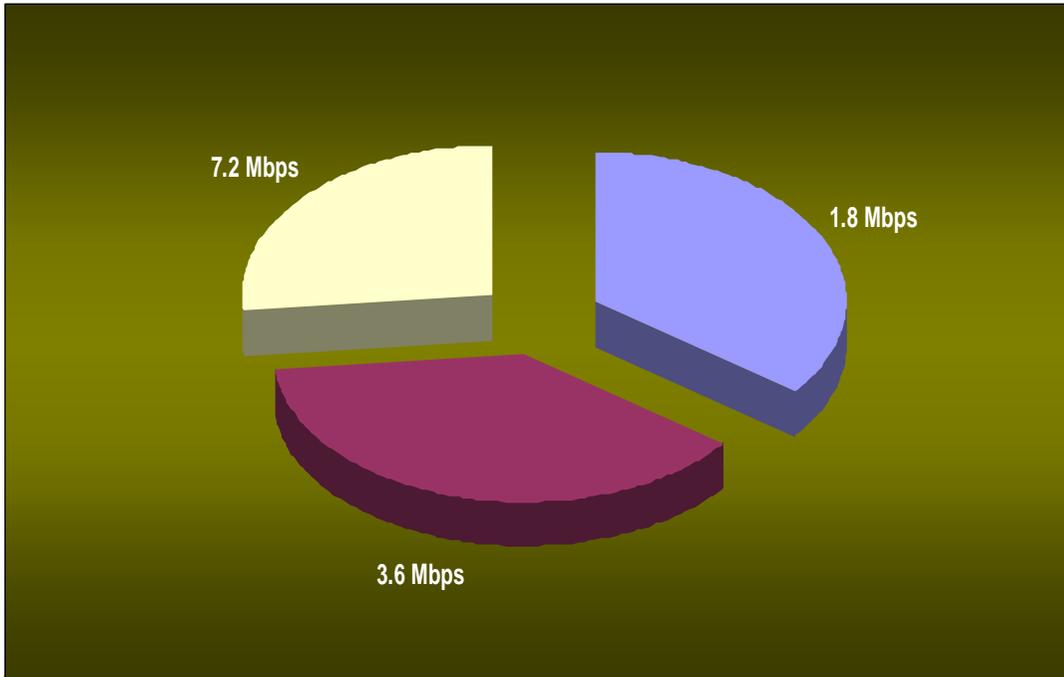
250 operators committed to HSPA

221 HSDPA launches in 96 countries

55 HSUPA launches

HSPA Operator Commitments Survey: GSA - October 2, 2008

Market snapshot – network speed evolution

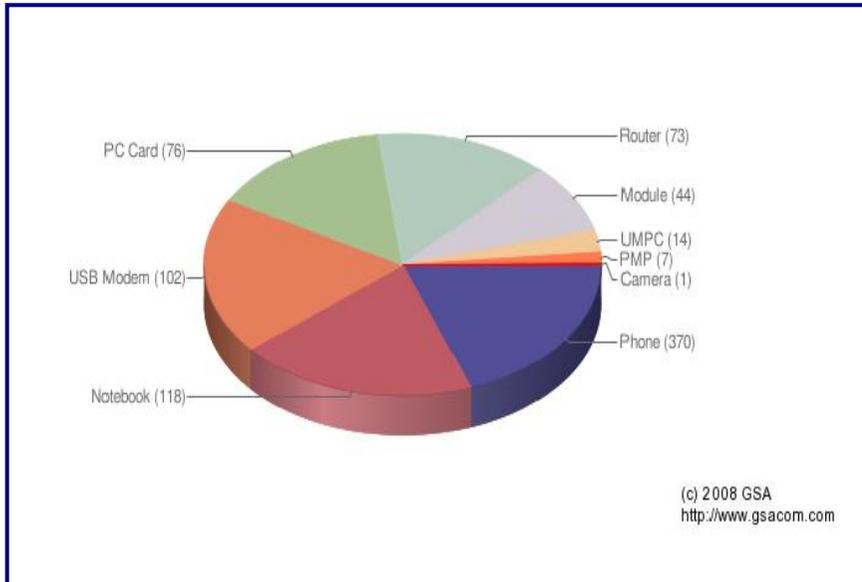


65% of HSDPA networks support 3.6 Mbps peak or higher

Over 26% of HSDPA networks support 7.2 Mbps peak or higher

*HSPA Operator Commitments Survey:
GSA - October 2, 2008*

Market snapshot – HSPA devices



HSDPA user devices are available in all form factors

805 HSDPA Devices

500 devices support 3.6 Mbps (peak) or higher

including

228 devices supporting 7.2 Mbps (peak) or higher

97 HSUPA Devices

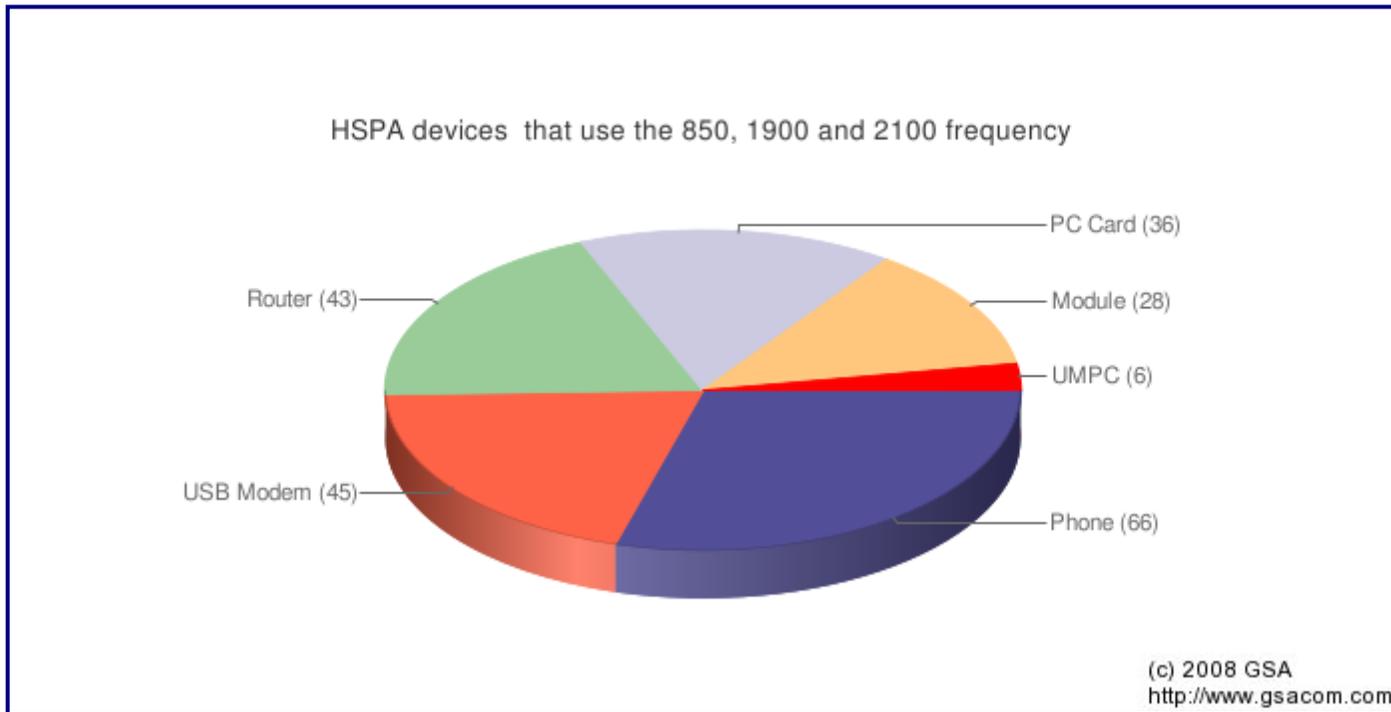
Number of products tripled in less than a year

28 support or are upgradeable for 5.76 Mbps

***HSPA Devices Survey:
GSA – September 7, 2008***

Market snapshot – HSPA devices

- *global roaming using tri-band devices*



224 tri-band 850/1900/2100 HSPA devices facilitate global roaming

**HSPA Devices Survey:
GSA – September 7, 2008**

UMTS900 Case Study on Elisa in Finland



GSA operator case study on Elisa in Finland shows significant cost and coverage benefits of deploying 3G services with UMTS900

“The availability of this first operator-based UMTS900 case study is a significant development, bringing clear business, technical insights and learnings which will greatly assist the extension of mobile broadband services to all”

GSA press release:
www.gsacom.com/news/gsa_252.php4

UMTS900 – A Case Study
September 2008

Elisa Corporation is the leading Finnish telecom operator and service provider with 2.4 million mobile subscribers and 50% market share in 3G services. Elisa also serves 500,000 DSL and 1.3 million fixed phone subscribers, which makes Elisa the market leader in those segments. In addition to its Finnish business, the company operates a subsidiary in Estonia that provides both mobile and fixed network services. A wireless pioneer, Elisa established the inaugural GSM network, made the very first GSM call and launched the very first GSM service in July 1991. In November 2007, the company continued its groundbreaking role by launching the world's first UMTS900 network service.

A Smarter Deployment Approach

The rollout of Elisa's UMTS900 network in suburban and rural areas was the natural extension of its initial 3G deployment in the more heavily populated urban areas of Finland using UMTS2100. UMTS2100 worked well in cities because the high subscriber density allowed a relatively compact cell site distribution. However, in bringing 3G to suburban and rural areas, Elisa needed to find a more cost-effective method of deploying the UMTS network where sparse subscriber populations demanded greater distances between cell sites. UMTS200 was the ideal solution because it offers a cell radius that is typically almost twice that of a 2100 MHz site. It also provides the same cell radius for packet data services as GSM900 voice, optimizing coverage and performance.

In addition, the performance of UMTS200 and UMTS100 is the same with typical data rates ranging from 2 Mbps to 5 Mbps and maximum peak data rates of up to 7 Mbps, but UMTS900 provides a much larger coverage area. As a result, UMTS900 can provide the same coverage with two to three times fewer cell sites than UMTS2100. That meant that Elisa could save 50% to 70% on its build out costs by deploying UMTS900 compared with UMTS2100.

The Overall Benefits

Conventional wisdom says that the cost of a large mobile network is directly proportional to the number of cell sites it requires. At the lower 900 MHz frequency, Elisa can use fewer sites to get full signal coverage in its suburban and rural areas.

"We estimate that UMTS200 coverage requires 50 to 70% fewer sites than needed for UMTS2100," acknowledges Pieter Thumme, the 3G coverage with UMTS900 can save 50 to 70% of our mobile network costs versus UMTS2100. And that includes both CAPEX and OPEX categories. It's no way day that you can realize a 50% saving in your network costs."

Dr. Eetu Piirä
Head of Access Networks, Elisa Corporation

Elisa also recognized that indoor coverage was a key benefit of UMTS900 mobile broadband usage. "If we had tried to deploy UMTS2100 from our existing GSM900 sites, we would have suffered a lot of coverage holes, especially indoors where the weaker 2100 MHz signals would have been degraded by going through walls and furniture.

Anywhere that Elisa had deployed a 3G network, whether that be UMTS900 or UMTS2100, the company has seen an increase in data traffic because of the higher data speeds and capacity. As 3G has been implemented in both urban and suburban areas, UMTS900 has earned a good reputation and boosted Elisa's customer satisfaction. "We've received very positive customer feedback on UMTS900," admits Lehti. "Many customers couldn't believe the performance of the 3G services. We're still in our early phases, but it's had a very good impact on customer satisfaction."

The Future of UMTS900

UMTS900 is becoming a standard feature on virtually every new 3G phone and data modem destined for European and Asian markets. As of mid-2008, over 30 compatible models have hit the market, so UMTS900 penetration is no doubt increasing. "Moving forward, UMTS900 compatibility will be one of our mandatory requirements for new devices, particularly for mobile broadband data modems," explains Lehti.

Elisa also recognizes the need to educate retail and suburban customers about the benefits of UMTS900-compatible devices. At the end of the day, the company needs the GSM900 users in these areas to use UMTS900-compatible devices to support data speeds eventually see the reason to upgrade.

"The number of UMTS900 terminals in the market is significantly increasing over time from multiple vendors including the leading industry players. The increase is seen in all form factors including phones, PC modems, embedded laptops, and routers which support data speeds compatible with UMTS2100 devices. In addition, there's no price barrier for end user adoption because UMTS900 and UMTS2100 terminals are priced the same," notes Lehti. "We're very close to the day when all new 3G terminals support UMTS900."

"The number of UMTS900 terminals in the market is significantly increasing over time from multiple vendors including the leading industry players."

Panu Lehti
EVP of Consumer Business, Elisa Corporation

Cost of Rural/Suburban Coverage (CAPEX & OPEX)

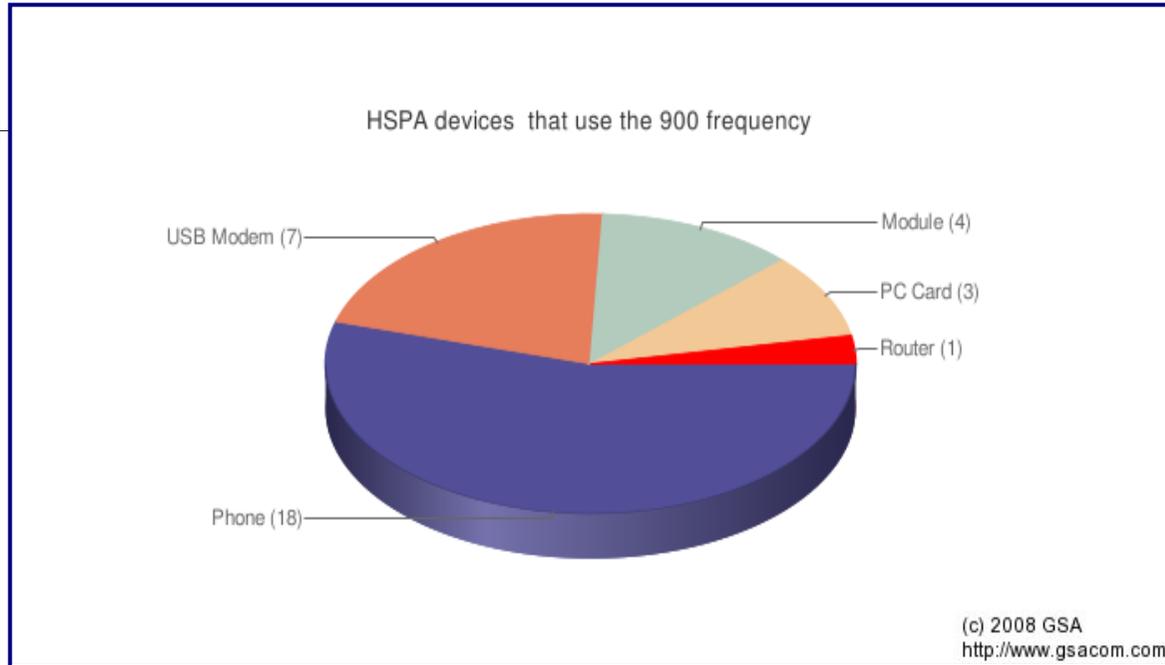
Technology	Relative Cost
UMTS2100	100%
UMTS900	30-50%

Elisa 3G Data Traffic

Year	Percentage Increase
2007	0%
2008	300%

UMTS900 Operator Case Study on Elisa (September 2008)
http://www.gsacom.com/gsm_3g/info_papers.php4

UMTS900 Devices



UMTS900 is in the product roadmap for most suppliers
33 UMTS900 devices launched by 9 suppliers

*HSPA Devices Survey:
GSA – September 7, 2008*



GSA Celebrates First 10 Years



10 Years since GSA was established

Reminder:

At that time there were 100 million GSM subscriptions, with 3G and the promise of new data services round the corner

9 years and 9 months in 3GPP as an MRP



Thank you! 3GPP, ETSI, GSMA, ICU, COAI and others who sent good wishes

Testimonials and citations
<http://www.gsacom.com/10years.php4>



Letter from ICU



Certificate from ETSI

GSA Mobile Broadband Forum

Amsterdam (September 16, 2008)

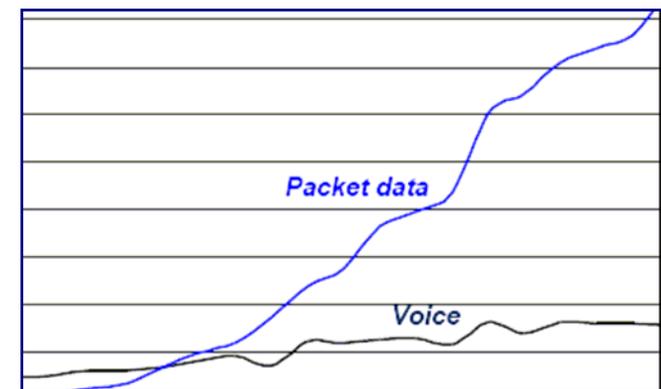


Information-sharing event organized by GSA

Mobilkom Austria, TeliaSonera and Hutchison 3 shared experiences, insights and learnings about the mobile broadband with invited audience of operators and vendors from GSA membership

Stimulating interactive session on the Uniqueness of Mobile focused on the value that mobile brings to the web and TV market that cannot be replicated by another platform

Ericsson, Nokia Siemens Networks and Qualcomm demonstrated the global success of HSPA/mobile broadband, and outlined the blueprint for success in the mass market and future evolution



Strong uptake in data traffic is reported

Current topics and activities

..... include

Mobile broadband and evolution: HSPA+, LTE

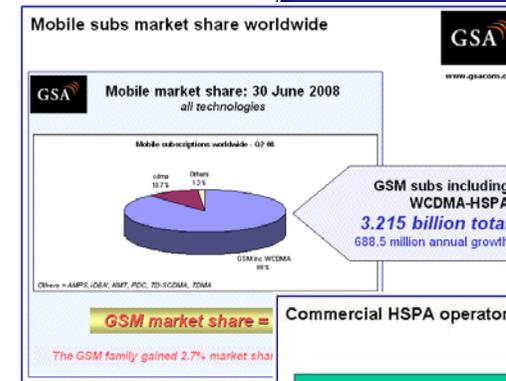
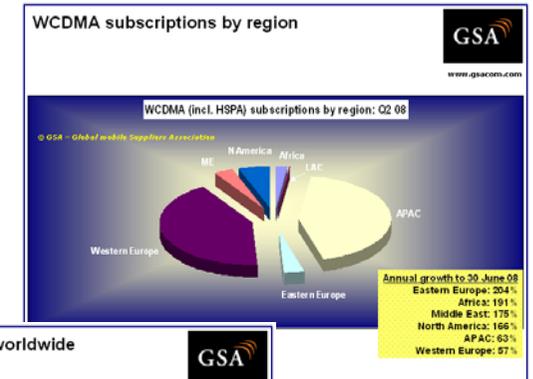
UMTS900

Environmental issues

Surveys

Collecting facts, developing the analysis, charts, maps

Information papers, case studies, seminars, articles

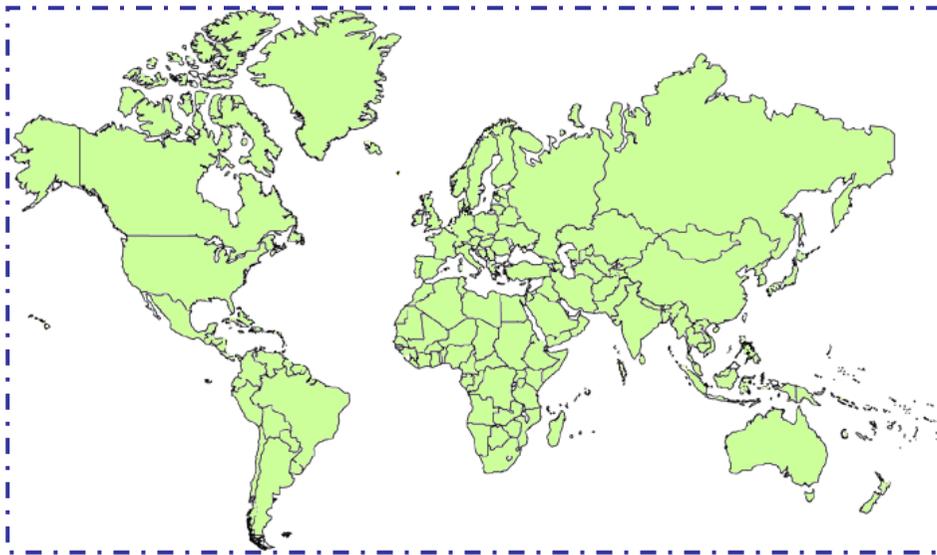


Commercial HSPA operators by region

	HSDPA	HSUPA
APAC	43	7
Europe	113	40
MEA	30	5
Americas-Caribbean	35	3
Totals	221	55

Source: CSA survey HSPA Operator Commitments - October 2, 2008
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GSA working with the 3GPP community



www.gsacom.com



<http://www.gsacom.com/rss/gsanews.php4>



<http://gsacom.mobi>

**In the year to October 1, 2008,
the GSA website was visited by
54,000 people from 195 countries**

1000 media reports per year

**13,000/document
downloads/month**

**GSA renews its offer of a beneficial co-
operation with 3GPP's Marketing &
Communications Officer**

www.gsacom.com

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